

***Medi-Cal Management Information
System and Decision Support System (MIS/DSS)***

***Data Enhancement Functional Specifications
for Eligibility, POPS & DHS Core
Phase 5***



March 23, 2000

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1. Overview

Eligibility data will be provided to The MEDSTAT Group by the Department of Health Services. The Eligibility Process includes the conversion of the Eligibility data to create three DataScan tables: the Eligibility Table, the Populations Table, and the DHS Core Table. These tables are used in conjunction with the Claims Tables and the Drug Table to allow for population based analysis.

1.1 Eligibility

The Eligibility Table will contain one record per eligible per month. The Enroll Date (ENROLLDT) will always be the first day of each month.

Example: A Medi-Cal beneficiary who is eligible from January through December will have 12 separate records in the Eligibility Table.

The Eligibility Table will include all eligibles, whether or not they had met their share of cost.

1.2 Populations (POPS)

The Populations Table is a summary file of the Eligibility Table that contains aggregated eligibility information. Information is not stored on an individual basis but aggregated together by a combination of fields. All rates calculated in DataScan use the Populations Table.

The Populations table will include eligibles who have met their share of cost or do not have a share of cost (Certified Eligibles), but will not include eligibles who have a share of cost and have not met it (Uncertified Eligibles).

1.3 DHS Core

The DHS Core Table is a holding place for the five core common data elements recommended for data collection by public health researchers to allow links across various data sets. Common elements include Birth Name, Birth Date, Birth Place, Gender, and Mother's Name. Each eligible will have one record in the table.

The DHS Core Table will include all eligibles whether or not they had met their share of cost.

Figure 1 gives a high-level view of the major conversion processes and helps illustrate the relationship between the processes. The shaded box represents the conversion process being discussed in this section.

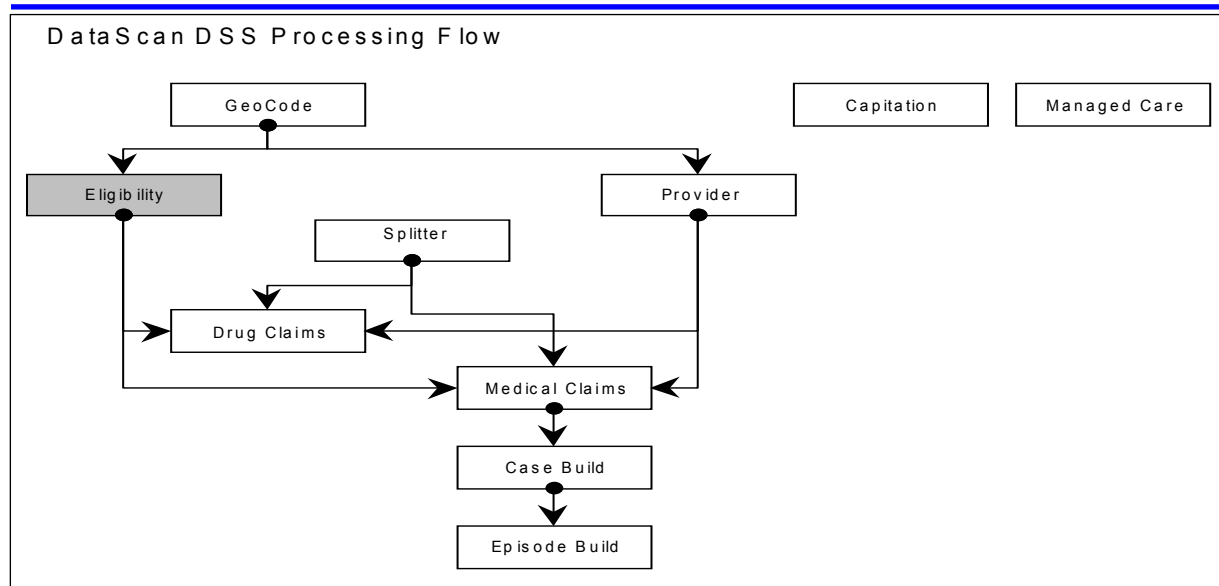


Figure 1. DataScan DSS Processing Flow

2. Prerequisites / Pre-Conversion

GeoCode is a prerequisite to the Eligibility Convert Process – Refer to the Data Enhancement Functional Specifications for GeoCoding Document for a more detailed description of the process.

The GeoCoding process for the Eligibility data will append a Zip Code, Latitude Code, and Longitude Code.

3. Indexes

The following matrix lists each table and its corresponding indexes:

Table	Primary	Secondary 2	Secondary 3
Eligibility	RELMO ENROLLDT EMPID	ENROLLDT CERTIND PRODUCT ELIGCAT AGE EMPID	ELIGCNTY NETWORK AIDCODE MEDPHP

Population	N/A	N/A	N/A
DHS Core	EMPID	N/A	N/A

4. Input Data

The eligibility data received from the State of California is an extract from the MEDS Monthly Extract File (MMEF): this file, with the appended fields from the GeoCoding Process, is then input into the Eligibility Convert Process. The conditions of the data coming into the convert are:

- The data will contain one record per eligible member per month. Each record will represent all eligibility data for an eligible for the particular month. There will not be overlapping eligibility periods for an eligible.
- The data will only contain records with valid county codes (see section 7 - Selection / Drop Criteria of this document).
- This data will only contain aid codes that are within Federally Funded Programs (FFP) (see section 7 - Selection / Drop Criteria of this document).
- Each incoming record will have a Start date. This date is the first day of the month the member is eligible. Since the eligibility segment/record will always be a 1-month period, the End date (or TERMDT) can be calculated as the last day of the month.

In order to calculate the time period for the 30 months of eligibility, the input file will have to be sorted, upon receipt by MEDSTAT, by CIN and Start Date.

Refer to Attachment 1 Input Eligibility File Layout for a complete listing of the input fields.

5. Output Data

The Input file used in the Convert program will generate two intermediate output files: a Converted Eligibility file and a DHS Core Fields file. These two intermediate output files will be used to create the three DataScan tables: the Eligibility Table, the Populations Table, and the DHS Core Table. The flow of this conversion process is shown in Figure 2 Eligibility, Population and DHS Core Data Flow Diagram (in section 8 Process Flow/Data Enhancements).

5.1 Intermediate Output Files

- Converted Eligibility file – This file is used to load the Eligibility Table and feed the Population build.

- DHS Core Fields file – This file is used to build the customer-defined DHS Core Table. The format of this file will be similar to the database design of the final DHS Core Table.

5.2 DataScan Tables

- Eligibility
- Populations (POPS)
- DHS Core

6. Reports

The *Eligibility* Convert Program will produce three reports: the Aggregate Statistics Report, the Failed Operations Log (FOLOG) Report, and the Unexpected Values Report.

6.1 Aggregate Statistics Report

The Aggregate Statistics Report will document all records that drop because of incomplete information or the field value did not fall within a pre-defined range.

The Aggregate Statistics report will include:

- Total number of records received
- Subtotal of records dropped and the reason they were dropped
(For *Eligibility*, total records dropped due to invalid aid code/county code, duplicate on CIN/start date, invalid start date, or invalid CIN number)
- Total of the records dropped
- Total of the records converted

6.2 Failed Operations Log (FOLOG) Report

The FOLOG Report will document records that have not been dropped but fail while converting raw input data into the format required for DataScan. The failure may be caused by one or more input fields that were not in the expected format (e.g., invalid data or non-numeric data in a numeric field).

The FOLOG Report will include:

- Field name

- Operation Number
- Description of the operation that failed
- Unmapped/undefined values found for that operation
- Count of the number of records with possible errors for that operation
- Percent of Total Records
- NETPAY amount associated with each failed value (will always be \$0.00)
- Percent of total NETPAY associated with each failed value (will always be 0%)

The types of problems that the FOLOG report can highlight are:

- Wrong input file was converted.
- Wrong conversion program was run against the input file.
- Input file format changed.
- Unmapped fields or field values were in the input data.
- Incoming input data values were all blanks or zeros.
- Unexpected field values were present in the input data.
- Improper records were dropped.

NOTE: Refer to the Field Level Detail for more specific information on the FOLOG calls individual fields that are reported on the FOLOG Report.

6.3 Unexpected Values Report

The Unexpected Values Report will be very similar to the FOLOG Report with several additions and will:

- Indicate when a failed value has been previously reported to the State and they have indicated that it is in fact a failure
- List the unmapped/undefined values found for each operation by PHPCODE

The fields on the Unexpected Values Report are a subset of the FOLOG Report and are driven by two Excel spreadsheets. The first spreadsheet is a list of FOLOG operation numbers to be included in the report. The second is a list of previously approved values to map to other/invalid for each operation number. The State has the responsibility of determining fields (of those listed in the FOLOG Report) to include in the Unexpected Values Report.

7. Selection / Drop Criteria

Input records meeting the drop criteria will be dropped and written to a “Dropped” file. A record of each drop is recorded in the Aggregate Statistics for Eligibility report.

Select fields are examined for *field specific value criteria*. The field is interrogated for certain exception values that are deemed “drop conditions”.

Input records meeting drop criteria will be dropped (excluded from further processing). When a record is dropped:

- The input record will be written to the “dropped file”
- A record will be written to the Aggregate Statistics Report (See section 6 – Reports for further details)

Drop criteria for the Eligibility Input File is:

1. **Multiple records per CIN (EMPID) and month.** Duplicate records for the same month are eliminated.

Drop criterion:

- CIN and StartDate match a record already on the input eligibility file.

2. **Invalid CIN (EMPID).** CIN is the primary identifier for an eligible, so it cannot be missing or invalid.

Drop criterion:

- CIN is all spaces, all zeros, or low values

3. **Start Date invalid or not in 30 month window.**

Drop criterion:

- Start date is not a valid date (CCYYMMDD).
- Start date is not within the 30 month window of the database
- Start date is not equal to ‘CCYYMM01’ (the first day of the eligible month)

4. **Invalid Aid Code Group.** (Eligibility only) Four aid codes and their corresponding county code and Status (Primary, 1st Special, 2nd Special, 3rd Special) are interrogated before a drop determination is made.

Drop criterion:

- If NONE of the four Aid Code Groups satisfy all three conditions, drop the record.
 1. Valid county code found on the ELIGCNTY map of valid values
 2. Status code between or equal to 001 – 599
 3. The aid code is within a Federally Funded Program (found on the ELIGCAT map)

8. Process Flow / Data Enhancements

1. The output file from the GeoCoding Process will be used as input into the Eligibility Convert Program.
2. The Eligibility Convert Program will produce two output files: the Converted Eligibility file and the DHS Core Fields file.
3. The Converted Eligibility file will be used to load the DataScan Eligibility Table and will feed the Population Build Process.
4. The Population Build Process will take in the Converted Eligibility File, aggregate it, and load it to a POPS Work Table.
5. This POPS Work Table will be loaded into the DataScan Population Table.
6. The DHS Core Fields file will be used to load the final DataScan DHS Core Table.

Figure 2 below provides an overview of this process:

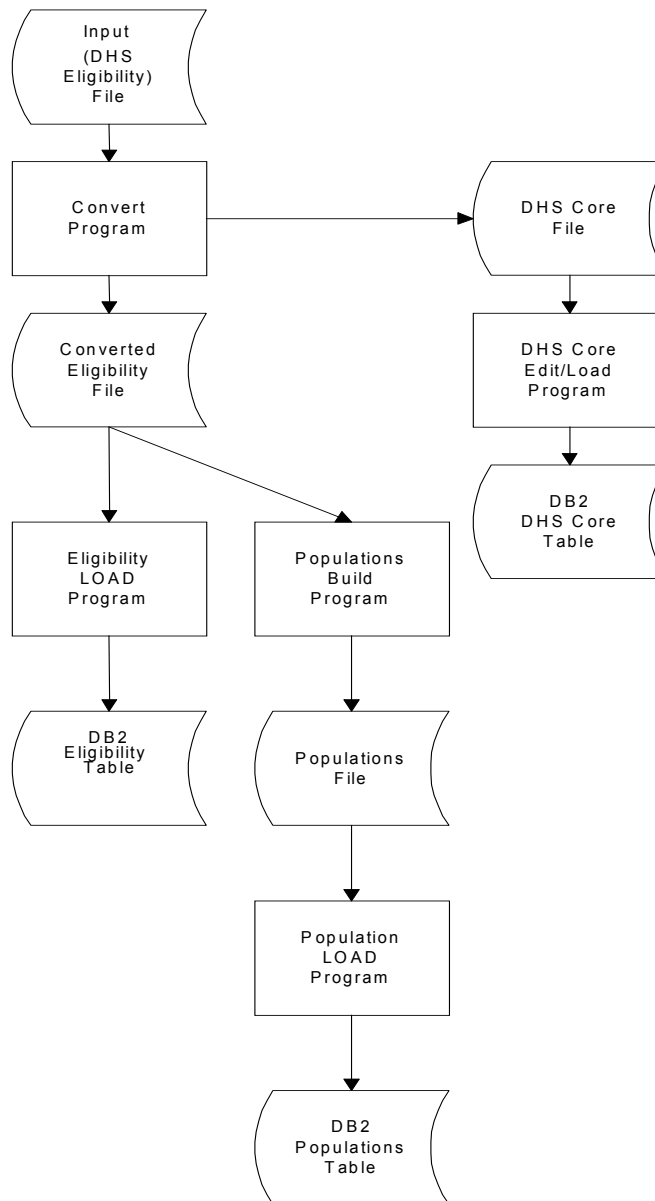


Figure 2: Eligibility, Population and DHS Core Data Flow Diagram

9. New Installation Considerations

There are no special considerations required which occur only during a new installation.

10. Update Processing Considerations

The update process consists of dropping off the oldest month of Eligibility data, replacing the last three months of Eligibility (retroactive) data and adding the current month of Eligibility data in the 30 month database. Update data received from the State every month contains 4 months of data. For example, if the last month (Start date) in the database is 5/1/1997, the data expected from the State (on 7/1/1997) will start on 3/1/1997 and go through 6/1/1997. This update will replace the months of 3/1/1997, 4/1/1997, 5/1/1997, add the month of 6/1/1997, and drop the month of 12/1/1994.

11. Maps and Validation Tables

Maps are used to validate source values before moving them as DataScan® output or to look up values for the DataScan® output based on source values. Hardcopy and Softcopy (for very large maps) of these maps are provided in the Maps section of the System Design Deliverable.

Map	Excel File Name	Resulted DataScan® Field Name	Type of Mapping
ALIENCD	ALIENCD.xls	ALIENCD	Used to validate the ALIENCD being converted
ALIENIND	ALIENIND.xls	ALIENIND	Used to validate the ALIENIND being converted
ELIGCAT	ELIGCAT.xls	AIDCODE, ELIGCAT	Used to validate the AIDCODE being converted and to assign the appropriate ELIGCAT value based on the AIDCODE
ELIGCNTY	ELIGCNTY.xls	ELIGCNTY	Used to validate the ELIGCNTY being converted
ETHNIC	ETHNIC.xls	ETHNICITY	Used to validate that a defined Ethnic Code value is being converted
FLGAPREL	FLGAPREL.xls	N/A	Unexpected Values Report – values approved to map to other/invalid
FLGKEYEL	FLGKEYEL.xls	N/A	Unexpected Values Report – FOLOG operation numbers to be included in report

Map	Excel File Name	Resulted DataScan® Field Name	Type of Mapping
LANGUAGE	LANGUAGE.xls	LANGUAGE	Used to validate that a defined Language Code value is being converted
MCALAGE	MCALAGE.xls	MCALAGE	Used to map the AGE of the eligible to Medi-Cal defined Age Groups
NETPROD	NETPROD.xls	NETWORK, PRODUCT, MEDPHP, VISION, DENTAL, LTC, MHP	Used to validate MEDPHP. Uses MEDPHP to assign NETWORK, DENTAL and PRODUCT
RESCNTY	RESCNTY.xls	RESCNTY	Used to validate the RESCNTY being converted
PLANTYP	PLANTYP.xls	PLANTYP	Used to assign PLANTYP from a valid MEDPHP

12. Tagging

There are no fields that will have values tagged from other tables.

13. Summary of Document Changes

<u>Date</u>	<u>Author</u>	<u>Phase</u>	<u>IRs</u>	<u>Description of Changes</u>
3/14/00	C. Swanson	5	1221	Removed highlighting from P5 System Design Deliverable and changed date. Also, updated index section to reflect how the indexes changed in Phase 4 (documentation was not up-to-date).
8/17/99	C. Swanson	5	1468, 1454	Removed references to AFDCAID, updated names of excel maps
7/28/99	K. Key	5	1052	Updated attachment 1 with new record layout for CRPINPT2.
1/6/99	C. Swanson	4	735	Reformat Background doc into standardized format
6/12/98	E. Zimmerman	3		New Document.

Attachment 1. Input Eligibility File Layout

```

*****
*   CRPINPT2
*   THIS IS THE RECORD LAYOUT FOR POPS
*   IT IS THE RESULT OF CRPINPT1 COPYBOOK  +
*   LATITUDE/LONGITUDE FIELDS AT THE END OF THE RECORD.
*
*   RECORD LENGTH IS 409
*****
*****
*   IR1052 - ADDED P5 CHANGES 4/08/99   LRECL=409
*
*           CNTY-OF-RES           INS-ENTRY-DATE
*           MONTH-SPEC3-CNTY      ALIEN-ELIG
*           MONTH-SPEC3-AID       R-A-IND
*           MONTH-SPEC3-ELIG-STAT
*****
05  :PFX:-SSN                      PIC  X(09) .
05  :PFX:-CIN-NUM                  PIC  X(09) .
05  :PFX:-CNTY-CASE-SERIAL.
    10  :PFX:-CNTY-SERIAL          PIC  X(07) .
    10  :PFX:-CNTY-FBU            PIC  X(01) .
    10  :PFX:-CNTY-PERS-NUM       PIC  X(02) .
05  :PFX:-XVI-CASE-SERIAL REDEFINES :PFX:-CNTY-CASE-SERIAL.
    10  :PFX:-XVI-CASE-1          PIC  X(01) .
    10  :PFX:-XVI-CASE-9          PIC  X(09) .
05  :PFX:-DOB                     PIC  S9(08) .
05  :PFX:-SEX-CODE                PIC  X(01) .
05  :PFX:-ETHNIC-CODE             PIC  X(01) .
05  :PFX:-LANG-CODE               PIC  X(01) .
05  :PFX:-SSN-VER-CD              PIC  X(01) .
05  :PFX:-RED-MM                  PIC  X(02) .
05  :PFX:-CASE-NAME               PIC  X(18) .
05  :PFX:-BENE-NAME.
    10  :PFX:-BENE-LNAME           PIC  X(20) .
    10  :PFX:-BENE-FNAME           PIC  X(15) .
    10  :PFX:-BENE-MI              PIC  X(01) .
05  :PFX:-BENE-ADDRESS.
    10  :PFX:-BENE-ADDR-1          PIC  X(26) .
    10  :PFX:-BENE-ADDR-2          PIC  X(26) .
    10  :PFX:-BENE-CITY-ST         PIC  X(20) .
    10  :PFX:-BENE-ZIP.
        15  :PFX:-BENE-ZIP-5       PIC  X(05) .
        15  FILLER                  PIC  X(04) .
05  :PFX:-MC-CNTY-DATA.
    10  :PFX:-MC-CNTY-DIST         PIC  X(03) .
*
05  :PFX:-MONTHLY-DATA.
    10  :PFX:-START-DATE           PIC  S9(08) .

```

10	:PFX:-MONTH-CNTY	PIC	X(02).
10	:PFX:-CNTY-OF-RES	PIC	X(02).
10	:PFX:-MONTH-AID.		
15	:PFX:-MONTH-TENS	PIC	X(01).
15	:PFX:-MONTH-UNITS	PIC	X(01).
10	:PFX:-MONTH-ELIG.		
15	:PFX:-MONTH-ELIG1	PIC	X(01).
15	:PFX:-MONTH-ELIG2	PIC	X(01).
15	:PFX:-MONTH-ELIG3	PIC	X(01).
10	:PFX:-MONTH-OC	PIC	X(01).
10	:PFX:-MONTH-SOC	PIC	X(05).
10	:PFX:-MONTH-HCPS.		
15	:PFX:-PLAN1-TYP	PIC	X(01).
15	:PFX:-PLAN1-HCP	PIC	X(03).
15	:PFX:-PLAN1-ST	PIC	X(02).
15	:PFX:-PLAN2-TYP	PIC	X(01).
15	:PFX:-PLAN2-HCP	PIC	X(03).
15	:PFX:-PLAN2-ST	PIC	X(02).
15	:PFX:-PLAN3-TYP	PIC	X(01).
15	:PFX:-PLAN3-HCP	PIC	X(03).
15	:PFX:-PLAN3-ST	PIC	X(02).
15	:PFX:-PLAN4-TYP	PIC	X(01).
15	:PFX:-PLAN4-HCP	PIC	X(03).
15	:PFX:-PLAN4-ST	PIC	X(02).
15	:PFX:-PLAN5-TYP	PIC	X(01).
15	:PFX:-PLAN5-HCP	PIC	X(03).
15	:PFX:-PLAN5-ST	PIC	X(02).
10	:PFX:-MONTH-MC-STAT	PIC	X(02).
10	:PFX:-MONTH-SURS	PIC	X(03).
10	:PFX:-MONTH-SPEC1-CNTY	PIC	X(02).
10	:PFX:-MONTH-SPEC1-AID	PIC	X(02).
10	:PFX:-MONTH-SPEC1-ELIG-STAT.		
15	:PFX:-MONTH-SPEC1-STAT-1	PIC	X(01).
15	:PFX:-MONTH-SPEC1-STAT-2	PIC	X(01).
15	:PFX:-MONTH-SPEC1-STAT-3	PIC	X(01).
10	:PFX:-MONTH-SPEC2-CNTY	PIC	X(02).
10	:PFX:-MONTH-SPEC2-AID	PIC	X(02).
10	:PFX:-MONTH-SPEC2-ELIG-STAT.		
15	:PFX:-MONTH-SPEC2-STAT-1	PIC	X(01).
15	:PFX:-MONTH-SPEC2-STAT-2	PIC	X(01).
15	:PFX:-MONTH-SPEC2-STAT-3	PIC	X(01).
10	:PFX:-MONTH-SPEC3-CNTY	PIC	X(02).
10	:PFX:-MONTH-SPEC3-AID	PIC	X(02).
10	:PFX:-MONTH-SPEC3-ELIG-STAT.		
15	:PFX:-MONTH-SPEC3-STAT-1	PIC	X(01).
15	:PFX:-MONTH-SPEC3-STAT-2	PIC	X(01).
15	:PFX:-MONTH-SPEC3-STAT-3	PIC	X(01).
10	:PFX:-INS-ENTRY-DATE	PIC	X(06).
10	:PFX:-ALIEN-ELIG	PIC	X(01).
10	:PFX:-R-A-IND	PIC	X(01).
10	:PFX:-MONTH-PRCT-OBLG	PIC	X(02).
05	:PFX:-BIRTHNAME-FIRST	PIC	X(15).
05	:PFX:-BIRTHNAME-MID	PIC	X(20).
05	:PFX:-BIRTHNAME-LAST	PIC	X(20).

05	: PFX: -MOTHER-NAME	PIC	X (20) .
05	: PFX: -BIRTHPLACE-CITY	PIC	X (20) .
05	: PFX: -BIRTHPLACE-STATE	PIC	X (02) .
05	: PFX: -BIRTHPLACE-COUNTY	PIC	X (02) .
05	FILLER	PIC	X (10) .
05	: PFX: -FILE-DATE.		
10	: PFX: -FILE-MM	PIC	9 (02) .
10	: PFX: -FILE-YY1	PIC	9 (02) .
10	: PFX: -FILE-YY2	PIC	9 (02) .
05	: PFX: -GROUP1-ZIP.		
10	: PFX: -GROUP1-ZIP5	PIC	9 (05) .
10	: PFX: -GROUP1-ZIP4	PIC	9 (04) .
05	: PFX: -GROUP1-LATITUDE	PIC	S9 (03) V9 (4) .
05	: PFX: -GROUP1-LONGITUDE	PIC	S9 (03) V9 (4) .
05	: PFX: -GROUP1-FILLER	PIC	X (02) .

Attachment 2. Sample of Aggregate Statistics for Eligibility

1CSBSTAT	MEDI-CAL		PAGE : 1
	AGGREGATE STATISTICS FOR ELIGIBILITY FROM 06/01/98 TO 09/30/98		DATE : 01/06/1999
			TIME : 19:21:16
-	# OF RECS	#DHS CORE REC	

# OF RECS READ	12,035,608	3,193,240.00	

0INVALID AID/FFP/COUNTY C			
0DUPLICATE ON CIN/START D	8		
0INVALID START DATE			
0INVALID CIN NUMBER			

0			
TOTAL RECS DROPPED	8		
0# OF ENR RECS CONVERTED	12,035,600	3,193,240.00	

Attachment 3. Sample of FOLOG Report for Eligibility

MEDFOLO	MEDI-CAL	PAGE :	1
	EXTERNAL FOLOG REPORT - ELIGIBILITY CONVERT	DATE :	01/06/1999
		TIME :	19:22:14
INPUT FILE : ELIGIBILITY CONVERT			
NUMBER OF RECORDS :	12,035,600	TOTAL NETPAY : \$	0.00

FIELD	OPR OPERATION	FIELD	%OF TOT
NAME	NO. DESCRIPTION	VALUE	RECORDS
		COUNT	NETPAY
			%OF TOT
			NETPAY

AGE_AMT	1 AGE OF ELIGIBLE	18560316 ***	4 0.0000
		19980703 *	1 0.0000
		19980705 *	1 0.0000
		19980708 *	2 0.0000
		19980709 *	1 0.0000
		19980714 *	2 0.0000
		19980716 *	1 0.0000
		19980718 *	1 0.0000
		19980720 *	1 0.0000
		19980722 *	1 0.0000
		19980723 *	1 0.0000
		19980730 *	1 0.0000
		19980810 *	2 0.0000

Attachment 4. Sample of the Unexpected Values Report for Eligibility

MEDFOLOU		MEDI-CAL UNEXPECTED VALUES REPORT - ELIGIBILITY CONVERT				PAGE : 1	
						DATE : 01/06/1999	
						TIME : 19:22:16	
INPUT FILE : ELIGIBILITY CONVERT							
NUMBER OF RECORDS : 12,035,600						TOTAL NETPAY : \$ 0.00	
FIELD NAME	OPR OPERATION NO. DESCRIPTION	NEW FIELD VALUE	PHP CODE	ERROR COUNT	%OF TOT RECORDS	NETPAY AMOUNT	%OF TOT NETPAY
LANGUAGE-ELIG	7 LANGUAGE	0		78	0.0006	0.00	0.0000
TOTALS FOR THE OPR-NO 7 :				78	0.0006	0.00	0.0000

Attachment 5. Field Level Detail

The field-level specifications that follow this document are in alphabetical order by output field name. When reviewing the field level detail of the Data Enhancement Functional Specifications, assume that Selection/Drop criteria section specified in this background document has been executed and the record has *not* been dropped